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OBSERVATIONS
ON THE
MEDICINAL PROPERTIES
OF THE
BLADUD SPA WATER.

UNIVERSITY
OF BRISTOL
MEDICAL





J. Murray, sculp. Bath.

B L A D U D S P A .

OBSERVATIONS
ON THE
MEDICINAL PROPERTIES
OF THE
BLADUD SPA WATER.

BY
CONWAY T. EDWARDS,
MEMBER OF THE ROYAL COLLEGE OF SURGEONS, LONDON,
AND OF THE BATH MEDICAL SOCIETY;
CONSULTING SURGEON AT THE BLADUD SPA,
AND SURGEON, BATHEASTON.

“ Blessings are like Birds, which hop around us with their wings
“ folded, and we do not see the beauty of their plumage, but when
“ they spread their pinions for flight; then we see all the bril-
“ liancy of their colour, and the gracefulness of their forms.”

E. COLLINGS, BATH.
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BY PERMISSION.

TO THE

RIGHT HONOURABLE

LORD JAMES O'BRIEN,

THIS

WORK IS DEDICATED,

WITH EVERY

SENTIMENT OF RESPECT,

BY HIS LORDSHIP'S

OBEDIENT SERVANT,

CONWAY T. EDWARDS.

PREFACE.

THE constant applications, which are being made at the Spa, for some guide to the taking of its waters, have induced me to publish the following little work. The various remarks which I have been led to make on its virtues, the manner in which it acts upon the system, and its influence over disease, are founded upon the experience of a vast number of cases which have been placed under my care, since the origin of the Establishment.

I now, therefore, trust my production, with what feelings may be more fully imagined than described, to that public, whose tribunal is as generous, as it is just.

C. T. E.

OBSERVATIONS
UPON THE
MEDICINAL PROPERTIES
OF THE
BLADUD SPA WATER.

SECTION I.

PERHAPS few discoveries have ever been made known more rapidly, or have excited more curiosity and interest, than the Mineral Spring recently discovered at Lark-Hall, in the immediate vicinity of that very beautiful and elegant city, Bath. From the want of fortuitous circumstances to develop it, this powerful Chalybeate has, in all probability, for a long series of years been running to waste; and thus the advantages, which

could have been derived from a medicine, so liberally and unsparingly supplied by the hand of Nature, have been lost to mankind.

Sceptical as most people naturally are to that, which is either wonderful in itself, or capable of producing surprising effects, it was not astonishing that, in the very infancy of its discovery, and when its fame was but limited in extent, being unsupported by anything save a few isolated cases of cure, many should have received the accounts of its medicinal powers with hesitation, while some derided them altogether. It was, therefore, only in perfect accordance with strict justice, that the Public should hesitate to repose any confidence in this Water, until they were satisfied, that its properties entitled it to some claim upon their patronage; and consequently an account of an analysis, made by a very eminent practical Chemist, was published in most of the newspapers.

That Analysis, so complicated in its detail, proved, beyond a doubt, that Iron existed in this Water in an almost *infinitely* greater proportion¹ than had ever been found to exist in any other chalybeate Spring as yet discovered; and thus, while Science, on the *one hand*, tended to reconcile the public mind, the integrity of the Proprietor of the Spa, on the *other hand*, no less contributed to overcome the prejudices and suspicions which, strange to say, had originated from the means taken to extend a knowledge of the powers and virtues of the Water. Individuals came to the Spa, and judged for themselves: they soon found, that the various statements, which had been published at different times, relative to the cures effected by the use of it, were well authenticated, and that the illnatured remarks directed against it, were nothing more than “weak inventions of the enemy.”

The circumstances, which led to the discovery of this medicinal Spring, were very

remarkable. In the year 1833, Mr. Blackwin, the proprietor, purchased a considerable quantity of uncultivated land in the lower part of the Parish of Swainswick, where he erected a house. The individual, to whom he let this building, converted it into a public-house, which went by the name of the "Bladud Sword." Shortly after the tenant had been in possession of the premises, he was desirous that a suitable building should be added for the purposes of brewing. Mr. Blackwin complied with his wishes.

In sinking for water to supply the brewery, the workmen, at the depth of fourteen feet from the surface, struck upon a bed of dark blue clay, from which sprung an enormous body of water, apparently adequate to any demand which might be made upon it. With this water the Innkeeper commenced brewing, and his consternation may be more readily imagined than described, when it was found to have produced a fluid, more approaching to

the colour of ink, than malt liquor. In the early part of the ensuing year, the water was, with immense labour, pumped out of the well, and a further sinking of sixteen feet effected. At that depth, a second bed of blue clay was arrived at, from which another spring, equal in magnitude to the first, burst forth. An experiment was then made, to test the effect of this water upon malt, when, from the extreme darkness of the liquid produced, its quality was not considered to be purer than that of the other. Mr. Blackwin now felt perfectly convinced, that this water contained compounds which materially affected its purity, and it was, consequently, a matter of the first consideration with him, to have it analysed as speedily as possible. An application was, therefore, made to Dr. Wilkinson, a gentleman well known in the scientific world, as possessing talent of the first order, for his opinion on the subject;—when his analysis proved the water to be a MOST POWERFUL CHALYBEATE.

Mr. Blackwin was now satisfied, that he had in his possession a very valuable natural medicine ; and he soon began to test its virtues, by distributing it to a number of poor people known to him, who were afflicted with diseases of the skin, and wounds in the legs.

The rapidity with which their complaints were dispersed and healed, induced an immense number of persons, in the surrounding neighbourhood, to apply for the water, and all received more or less relief from it. Thus convinced of its power over a most numerous class of revolting diseases, the Proprietor determined to give it that publicity, which its extraordinary virtues merited. With permission, he advertised a certain series of cases wherein its use had succeeded, detailing, at large, the history of each complaint. He soon, at his own expense, and without the assistance of a single individual, but backed solely by the hope, that one day his Spa would shine like a bright and a beautiful star of the first magni-

tude, built a neat and convenient Pump-Room, with Baths and Dressing-Rooms; and when he had supplied them with every thing requisite for use, he cleared the surrounding grounds, erected a lofty wall around them, and laid out the area in parterres, lawns, and walks, in tasteful arrangement, for the pleasure and accommodation of the visitors. His exertions did not pass unnoticed, nor unrewarded: a Nobleman, whose widely extended benevolence has ever reflected a lustre upon his high rank, gave Mr. Blackwin his support, at a moment, when a very strong attempt was made to crush his infant institution, which he fondly hoped would be considered an honour to himself, and would become in time a source of much attraction to the City of Bath. A Lady of distinction, also, gave it her honorary countenance. The effect of all these united circumstances was immediately visible; opposition ceased, and Mr. Blackwin, proud in his support, and assured beyond doubt of the virtues of the

water, gave it to the public for their inspection and patronage.

The Spa is situated in one of those beautiful and romantic vallies, with which Somersetshire abounds. On the right, and looking towards the South-west, it is bounded by one of the most elevated of the numerous hills in the county, Lansdown; on the left, by undulating land, which extends to the river Avon; before you, lies the beautiful City of Bath, ever famous for her warm medicinal springs, from which it is distant about one mile; to the North-west, the valley becomes more and more lovely, being intersected by a sparkling stream, which, like a gentle spirit, here silently, yet brightly, glides along—there hurries down little precipices, in mimic cascades, overshadowed with the soft and silvery foliage of the mimosa, or the more graceful and elegant *salix caprea* and *fragilis*, it presents features of attraction equalled by few other places. The air, which circulates through the valley, is

mild and salubrious; while the Spa itself, sheltered on every side by hills, is admirably adapted for the permanent restoration of that blessing, without which the mind of man finds little to engage its attention, or interest its affections, in this sublunary scene.

SECTION II.

It is not surprising that mineral Springs are continually being discovered, when we reflect, that the Globe itself abounds with such a variety of earths, salts, alkalies, metals, and minerals, over which water, in its transit from one situation to another, must pass.

Now from the nature of those elementary bodies of which water is composed, and from the extensive range of its own affinity, it freely combines with most substances, or causes them to form, by intimate combination with each other, new compounds, which then become endowed with new properties and

principles. It is on this account, that the water, which we take from springs or other sources, is never absolutely pure; and we, consequently, meet with it containing lime, alkalis, acids, various neutral salts, and proto carbonates of metallic oxides, but never in that state, to which it is brought by the artificial aid of distillation. It, therefore, being the property of water, to hold in solution portions of most substances which it meets with, as it percolates through the soil, it will partake of the character of that soil, and of those strata through which it passes. When it has filtered through granite or quartz, it is almost pure; if it passes through beds of lime-stone, portions of it are held in solution, and communicate a hardness to the water. All these waters are well adapted to ordinary domestic purposes, and, as such, are generally used without further preparation. Frequently, however, as in passing through pyrites, it becomes so strongly impregnated with saline and mineral productions, that it not only acquires

a nauseous taste, but also, by decomposition, and a new arrangement of elementary principles dependent thereon, gives rise to the production of gases the most offensive, as is exemplified in the Harrowgate and Middleton Springs. It is then termed a Mineral Water.

There are many varieties of Mineral Waters.

First. The Saline, which are sometimes found in a warm state, as in the Bath Waters, the temperature of which is very surprising; but most frequently of a common temperature, or perhaps rather below it, as is seen in the Cheltenham, Melksham, Leamington, Scarborough, and Thirsk Waters, with the very celebrated one of Seidlitz.

Secondly. The Sulphureous.

Thirdly. Those which contain such a large proportion of carbonic acid, that the term

“Acidulous” is applied to them. Among the most celebrated of this class may be mentioned Pyrmont, Seltzer Spa, and Carlsbad, whose temperature is 42° above the Bath Waters.

And lastly. The Chalybeate, for an example of which we will go no further than the “Bladud Spa;” for although they are widely dispersed, rare indeed are the instances, in which their strength approaches to that of the above-mentioned remarkable Spring.*

* Since the recent statements and discoveries made by a Gentleman,† now well known to the scientific world, relative to the action of water upon metals, and the effect of the galvanic fluid, then generated, upon water containing crystallizable matter, it is not improbable, but that almost every change which takes place beneath the surface of the earth—whether it be in the formation of substance, the generation of gases, acids, &c., or the production of caloric—may be attributed to the galvanic power. This question is a very interesting one; for, if the conclusion be admitted, we should have a clue given, that might lead to one of the proximate causes, which produce the

† Mr. CROSSE, of Bristol.

Chalybeate Waters are those which hold in solution a carbonate, or a sulphate, of iron, by means of carbonic acid. From the very minute division, in which the metal exists in the water, and from the perfect manner, in which it is dissolved, they are singularly efficacious in dispersing many diseases, in alleviating others, and in giving a general tone of vigour to the system. Hence it is evident, that that water, which contains the largest proportion of iron, must possess the greatest means of producing such desirable effects ; in comparing, therefore, the analysis of the Bladud Spa with those of other mineral springs of a similar nature, I do so, not with any intention of dis-

heat of certain mineral springs. Indeed when we reflect upon the vast and immeasurable quantities of mineral productions, of metals in their pure, and uncombined state, besides the myriads of other substances acted upon by water, imagination can form no idea of the quantity and intensity of the galvanic fluid, which is unremittingly being generated, and which must be equal to the decomposition of every compound body, with which it may come in contact.

paraging *their* merits, but from a conviction, that, whatever has a claim to the attention of the public, ought to stand out in full relief, that its qualities and character may have the benefit of an impartial judgment. The following is an account of the first Analysis of the Bladud Spa Water, made by Dr. Wilkinson.

Analysis of the Bladud Spa Water.

From the evaporation of a Pint
 were produced, of solid matter, 8 grains.
 A subsequent experiment with
 two Pints 16 grains.

TESTS.

Nitrate of Silver White precipitate.
 Solution of Baryta White precipitate.
 Prussiate of Potass No effect.
 (On the addition of Nitric Acid, an intense blue
 was produced.)
 Oxalate of Ammonia ... White precipitate.
 Acetate of Lead White precipitate.

Tincture of Galls Dark purple.
 (Nitric Acid also produced a purple tint when
 used to decompose any Carbonate of Lime.)
 Pure Ammonia A slight discolouration.

From these tests it appears that there exist iron, lime, sulphuric, muriatic, and carbonic acids. The dried ingredients produced from a pint of water were

Carbonate of Iron 3 grains.
 Carbonate and Sulphate of
 Lime, of each $1\frac{1}{2}$ grain.
 Muriate of Soda 2 grains.
 (There were also some slight traces of Magnesia.)

These experiments were repeated several times, with, invariably, similar results.

Shortly after the above analysis had been published, reports were industriously circulated, that the water contained not a particle of iron. This opinion could only have been advanced by those, who either did not take the

trouble to analyse it, or were incapable of so doing; therefore they, of all persons, were the least justifiable in making such a statement; and it certainly neither speaks well for their candour, nor liberality, to advance an opinion in the highest degree so injurious to the credit of the water. They, however, had this *one* redeeming virtue; their modesty prevented them from supporting, with their *names* that which they had failed to do with their assertions.

The correctness of the Doctor's Analysis was fully borne out by that made by Mr. Henry Noad, of Shawford, near Frome. Mr. Noad conducted his experiments *at* the Spa; he obtained the water immediately from its source, before the carbonic acid gas had time, or opportunity, to escape; and, consequently, while it retained all its brightness. Neither time, nor expense was spared, to arrive at the most accurate conclusion; and he discovered, that a larger quantity of iron existed

in the same proportion of water than Dr. Wilkinson had. This was a circumstance of a most consolatory nature to Mr. Blackwin, who, before he *published* the result of Mr. Noad's analysis, requested him to repeat it. The request was complied with, and the following will be found to be an accurate account of the result.

*Mr. H. Noad's Analysis of the Bladud Spa
Water.*

Carbonic Acid Gas, variable in quantity.	
Temperature of the Spring, 48°.	
Specific Gravity	1.0014.
Solid contents of 16 ounces	7½ grains,
which consisted of Iron held in	
solution by Carbonic Acid . . .	3¼ grains.
Carbonate of Lime	1½ grain.
Sulphate of Lime	1—27 grains.
Muriate of Soda, with Mag-	
nesia, probably as a muriate,	1—75
Total	7—31
Loss,	21

Such being the result of two analyses, made by separate individuals, there can remain no doubt, as to the presence of iron in the water; whilst the analyses themselves stamp the water with a character of the highest value.

We will now compare the solid contents of the water, with those of some of the most celebrated mineral springs in this country; and will commence with that which has been recently discovered at Brighton. The Analysis was conducted by a Gentleman, who has devoted much of his time to analytical chemistry.

*Dr. Saunder's Analysis of the Brighton
Spa.*

Solid contents of a Pint of the

Water	8 grains	$\frac{1}{36}$
Sulphate of Iron	1	$\frac{1}{86}$
Sulphate of Lime	4	0.9

Sulphate of Soda	1	$\frac{1}{50}$
Muriate of Magnesia		$\frac{1}{75}$
Silecious Earth14
Loss19

The iron, according to Dr. S.'s Analysis, exists in this water in the state of a sulphate, which is of very rare occurrence; its nature is, therefore, much more stimulating than that of other chalybeate springs, which contain the iron in a proto carbonated state.

*The Analysis of the Bath Waters,
by Phillips.*

Temperature	109° to 117°
Specific gravity	1.000.2
Carbonic Acid	1 — 2 Inches.
Carbonate of Lime	0 — 8 grains.
Sulphate of Soda	1 — 4
Sulphate of Lime	9 — 3
Muriate of Soda	3 — 4

Silicia 1 — 2

Oxide of Iron—a trace.

In the Leamington Sulphureous Spring, there is only a trace of the protoxide of iron; in the Saline, the same. In the Tunbridge Wells Water, there exists a considerable quantity of the oxidized iron.

Analysis of the Tunbridge Wells Water.

Specific gravity 1.0007

A Gallon contained

Muriate of Soda	2 grains	46
Muriate of Lime	0 —	39
Muriate of Magnesia	0 —	29
Sulphate of Lime	1 —	41
Carbonate of Lime	0 —	27
Oxide of Iron	2 —	22
Traces of Magnesia, and silicious matter	0 —	44
Loss	0 —	18

*Analysis of the Harrowgate Water,
Oddie's Chalybeate.*

Specific gravity	1.0053	
A Gallon gave of		
Muriate of Soda	300	— 4
Muriate of Lime	22	—
Muriate of Magnesia	9	— 9
Sulphate of Lime	1	— 86
Carbonate of Magnesia	—	8
Carbonate of Lime	6	—
Oxide of Iron	2	— 40
Silicia	—	40

The Buxton Waters contain no iron. The Cheltenham, and Melksham Waters depend, for their celebrity, upon the neutral aperient Salts, which they contain.

By the foregoing statements of the quantity of iron, held in solution by some of the most celebrated chalybeate waters, it will be perceived, how greatly the Bladud Spa

exceeds them in its contents of that most important ingredient; and that, by how much the former are capable of producing surprising and salutary effects, by so much will the latter exceed them.

In order to convince myself of the extent of iron contained in the Bladud Water, I analysed it several times; but, on no one occasion, did I find the quantity of iron to correspond exactly with that obtained, either by Dr. Wilkinson, or Mr. Noad. In my first analysis, I could not discover more than two grains and a half in each pint; in my subsequent experiments, I collected very nearly three grains out of the same proportion of water. This discrepancy arose from a want of that constant practice, so requisite to prevent loss from adventitious circumstances. The separation of the carbonates, muriates, and sulphates of the various alkaline earths—the precipitation of the proto-carbonated protoxidized iron, by means of the ferro-prussiate

of potass, from the water, from which the various salts had been thrown down—the allowance to be made for the iron contained in the ferro-prussiate of potass—require that dexterity in the performance, and that nicety in the calculations, which only great experience can give; for it is a natural consequence, that from the most experienced hand will be obtained the most accurate and satisfactory results.

The water, when recently taken from the well, is bright, transparent, and very sparkling. On exposure to the atmosphere for a considerable time, it becomes dull, and emits a very unpleasant odour. On the application of heat, so as to expel entirely the fixed air, a copious ochry sediment is thrown down; and the same result takes place, in the course of time, without the application of heat. The disagreeable odour is the effect of the decomposition of the water, and the interchange and new combination of elements dependent

thereon; whereby the iron receives another proportion of oxygen, and a compound gas (carburetted hydrogen) is evolved. As the iron is held in solution by the carbonic acid gas, the full benefit of the water cannot be received, unless it be drank at the spring.

SECTION III.

“WHEN Iron is taken into the stomach, it acts as a powerful tonic; increases the general excitement; promotes the digestive powers; gives a particularly florid hue to the blood; and augments, in a great degree, the energy of the muscular fibre.”

Possessing the power of producing these happy effects, it has been pushed, in many instances, to such an extent, as to overthrow the design for which it was given; for when exhibited, in certain constitutions, in large and often repeated doses, with the idea of rapidly increasing the strength, the sensibility

has become painfully acute, the irritability of the whole system has been very much increased, and the brain has often suffered from such systemic derangement,—the cheeks have become flushed, the eyes unnaturally brilliant, and the skin and tongue hot and dry. Such being the effects of iron upon some systems, it cannot be a matter for much surprise, that, if a chalybeate water, so powerful as the one under consideration, be taken unadvisedly, results, of a very serious nature, should be produced.

There are many peculiarities, in every constitution, which, if not attended to, or rashly trifled with, bring on a train of evils which cannot be shaken off. There is a condition, moral, as well as physical, of every system, which cannot at all times be acted upon with impunity; for often, when the glow of health seems to mantle on the cheeks, and light and life to sparkle in the eyes, the latent seeds of disease are roused into action, and the beat-

ing of the heart too truly tells, that they are striking their destructive roots, far and deep, into the system.

There may be some, who smile at the existence of disease, before it has developed itself, as living only in the imagination. But as a seed, planted in the earth, remains there, awaiting certain changes, before it bursts into a plant, so do the generality of diseases require a certain state of things, to mould their distinctive characteristics, and a definite time, before those characteristics can be fully developed. Those, therefore, who, in the pride of youth, and health, and strength, sweep on in their career, like a bright and a sunny stream, little think they carry with them a point, which, like the heel of Achilles, is but too vulnerable!

For example. Two young men, of equal age, of the same temperament and turn of mind, and possessing, to all appearance, the

same physical and constitutional strength, shall,—after having performed some feat of agility, which has called forth an inordinate and preternatural action of the heart and arteries, whereby the lungs are violently acted upon, and the system is forced to seek relief in an excessive perspiration,—drink a glassful of cold water: in a short time, one shall be attacked with some violent inflammation, while the other will experience no inconvenience.

Two Ladies of different constitutions, one full of health and life, the other (from, perhaps, a too sensitive state of the nervous system) labouring, to all appearance, under indisposition, shall, after a dance, indulge in the hazardous custom of taking ice. Now these ladies might have done the same thing yesterday with impunity; but to-day the *condition* of the system is altered,—the latent seeds of consumption are roused into activity, and she, whom we considered the more healthy, falls a

victim to its irresistible power. Now to what other conclusion can we come, respecting the different results arising from the same exciting cause, but that there exists, in every individual, a particular state of the system, more excitable at one time than another : this state is its *condition* ; and, according to that condition, is its powers of resistance.

If, then, a small quantity of ice, or a glass of cold water, can be productive of such fatal consequences, is it to be supposed, that a powerful chalybeate can, at all times, and by all individuals, be taken without detrimentally affecting the system ?

The few cases, in which the Bladud Spa Water has brought on feverish symptoms, or determined a larger flow of blood to the brain, than its beautiful and delicate structure could bear, were those, in which no precautionary measures had been taken ; and thus, the blame rested, not upon the water,

but with the persons who had so unadvisedly taken it. Again, it is not every constitution, that will, at any time, bear the stimulating properties of a mineral tonic, even when compounded by the hand of Nature, with that unapproachable delicacy and nicety, by which all her operations and productions are so remarkably distinguished ; and surely, it is not only hazardous, but dangerous in the extreme, to lay a tax upon a constitution without knowing its capabilities of endurance. Yet, under proper regulations, as to diet, rest, and exercise, there are numerous complaints, in which such a powerful chalybeate, as that of the Bladud Spa, will prove of the greatest utility ; and when we reflect, who is the Chemist, how boundless are her stores, and how perfect her hand, can we be surprised, that the medicines she prepares, should oftentimes answer the proposed end, far more agreeably, and far more effectually, than those, which are compounded by the hand of Man?

It may appear singular to many, that mineral waters should possess such power over an immense variety of obstinate and vexatious complaints, seeing that the quantity of active substance, held in solution by the strongest of them, is so very small. Few professional men would, I am inclined to believe, rely upon a salt, of the same weight and properties as that which is contained in a pint or a quart of any mineral spring, to produce the same effect; and therefore the benefits, which result from the use of mineral waters, must be referred to other circumstances, than those of their solid contents.

Look, for instance, at the effect of a saline aperient, such as the Cheltenham or Melksham water:—what is it? An action upon the alimentary canal, accompanied with a check upon the flow of saliva. Continuing its use, the secretion of the latter fluid returns, while the health, dependent, as it is, upon the regularity and strength with

which the stomach and alimentary canal perform their functions, rapidly improves under their use.

The Harrowgate and Middleton Springs are said to act specifically upon the skin. Now, when we compare the quantity of active principle contained in such waters, to the effect resulting from their use, we find that it is not at all commensurate, for the latter infinitely exceeds that which we could have possibly anticipated from the former. There must, consequently, exist some other principle, in mineral waters, besides that which comes under the immediate cognizance of our senses. Were this not the case, why should not the warmth of the Bath Waters enervate and relax the tone of the stomach? Instead of so doing it actually increases it; "for when," observes Dr. Wilkinson, in his *Analytical Researches into the Properties of the Bath Waters*, "the organs of digestion are in a state of debility, arising from in-

“temperance in eating or drinking, or con-
 “nected with constitutional weakness, origi-
 “nating from other corporeal affections, in
 “such cases the Bath Waters are found bene-
 “ficial!” Dr. Thomson remarks, “that the
 “virtues of the Bath Waters depend almost
 “altogether upon their temperature.” Yet
 were this the case, any water of a similar
 temperature should produce tonic effects when
 taken internally. The Dr. proceeds to ob-
 serve, “that some of the good effects of all
 “mineral waters must be allowed to proceed
 “from change of scene, relaxation from
 “business, amusement, regular hours; and in
 “*these circumstances*, the drinking the waters at
 “the springs possesses advantages which can-
 “not be obtained from *artificial waters*, how-
 “ever excellent the imitations may be, nor even
 “from the natural waters, when bottled and
 “conveyed to a distance from the springs.”

Another circumstance which tends to pro-
 duce salutary effects from the drinking of mine-

ral waters is, that, not anticipating a rapid improvement, we patiently wait for the benefits we are led to expect. Small, but sufficiently active, doses of medicine are occasionally taken to assist the power of the water; and, after the patient's steady perseverance in a fixed plan for a certain time, complaints of the most chronic character are generally entirely dispersed, and the health is restored perhaps to its pristine vigour. On the other hand, when entirely under the care of a medical practitioner, many are too anxious to have their diseases, particularly if of long standing, suddenly cured. Some are not content, unless they are sensible of the action of medicines,—unless they see them producing vomiting, faintness, violent perspirations, &c. They cannot submit to the tedious process of having a disease treated and led away in a gentle manner;—it must be goaded, not directed; driven, not led;—while, from the “spurring which the medical man receives,” as a most talented and witty Doctor of the

city of Bath observes, "he sometimes does those things his conscience tells him he ought not to do." These observations apply solely to the treatment of chronic cases, and particularly to those of *disordered functions*. Active and violent inflammatory diseases require a very different kind of treatment.

SECTION IV.

IN order that we may comprehend the manner in which the Bladud Water, as well as other medicines, act upon the human frame, we will take a general view of a very important and wonderful set of vessels, denominated "Absorbents;" for it is through them the active properties of medicines, and the nutritious particles of our aliment, are transmitted to the grand centre of circulation.

At the first shudder, which indicates that fever has attacked the system, the beautiful softness of the skin, produced by insensible perspiration (that wonderful provision which Nature has made to prevent the heat

of the Summer's Sun, or the piercing blasts of the Winter's Wind, from injuring that admirable covering of the human frame) passes away; but soon the disease assumes its peculiar form and character, and then the features lose their roundness, the body its wonted contour. This is caused by the loss of the adipose, or fatty tissue. As the fever progresses in an aggravated manner, the muscular fibre falls away beneath its influence, until the strength of a once powerful frame is dwindled to worse than infantile weakness, and its bulk to but a shadow of what it was before. This wasting away of the solids of the human body is the effect of disease upon the absorbents. The name of these singular vessels well explains the nature of their functions; and they are unremittingly exercising them, both when the body is in a healthy state and when it is affected with disease: from their incessant activity, the whole system is continually undergoing great and material changes. If this were not the case, why should

it not bear up against the ravages of time? Why should it be open at one period to the slightest infection, and at another be capable of resisting the overpowering miasm arising from the most deadly fevers? Daily events prove how true that index must be, which points to the ever varying states of the component parts, and integral particles, of the human frame, as causes! So much for the general features of the absorbents. We will now consider their distribution.

If a violent blow fall, no matter on what part of the body, a great discolouration of the skin soon supervenes: this, as we are all well aware, arises from an effusion of blood, caused by a laceration of the blood vessels. In a few days, we find that the discolouration has totally disappeared; the skin has resumed its natural appearance. This has been effected by the absorbents, and it proves how generally they are distributed, and how unremittingly their functions are carried on.

As it is not my intention to enter here into a minute detail of these vessels, it will be sufficient for our purpose to mention, that they are situated internally as well as superficially, and it is to the internal ones we must principally look for the benefits we derive from food and medicine.

These vessels possess the power of discriminating, and of appropriating to themselves, the nourishing principle which exists in our food. United in a wonderful manner to those situated superficially, they at last terminate in two tubes, which open into veins, not very far distant from the heart. These tubes, from being situated principally within the chest, are termed Thoracic: they convey a white fluid, and transmit it into the veins, from whence it is poured into the grand centre of the circulation (the heart), where, by an inexplicable process—by a process which has hitherto defied all the boasted pride, and power, and ingenuity, and perseverance of man to dis-

cover—that fluid is converted into red blood, and becomes endowed with vitality; and thus, indeed, it forms the “stream of life.” Such is this wonderful system, which, at the same time that it administers to the repair and growth of the body, takes also an active part in its destruction.

Having thus described the general character, distribution, and functions of the absorbents, we shall now more readily comprehend the manner in which, among other remedial means, the Bladud Water acts upon the system.

On its application to diseased parts, such as unhealthy wounds of the flesh, or those obstinate affections of the skin, from which children frequently suffer so severely, the surface of the wound soon changes its appearance, and the disease its character. A new, and not uncommonly, a severe inflammation is established, which destroys the original

disease, when that substituted for it soon disappears under the usual treatment. In such cases the absorbents are roused into action by the power, as well as the novelty, of the stimulus which is being applied to them: part of it is absorbed, and part takes effect upon the presenting surface, while the united efforts of both tend to the destruction of the disease.

ILLUSTRATION.

Mr. Curtis, of the Foreign Office, London, having heard of the beneficial effects resulting from the use of the Bladud Water, in ill-conditioned ulcerous wounds of the legs, put himself under my care in the latter end of September last. He had been troubled for several years with a very severe wound in the leg, which had resisted every means that had been tried for its relief. He was a man of middle age, stout, and of a sanguineous temperament.

On examining the leg, I found that the veins were very much enlarged, or what are technically denominated, varicose. Immediately above the external ankle there was a very foul and irregular wound, about two inches in length, by rather more than an inch and a half in breadth, and three or four lines in depth: a prodigious inflammation surrounded it, and extended some distance up the leg. He had latterly been in the habit of using the red precipitate ointment, and rolling the leg with a bandage.

I put him under the influence of saline medicines, with occasional doses of the compound calomel pill; and directed a mild unirritating ointment to be applied in place of the red precipitate, and the roller bandage to be continued. This was on a Saturday; on the Wednesday following, there was no perceptible change in the appearance of the wound, but the violence of the surrounding inflammation was certainly abated. I now directed him to put his leg

into a panful of the chalybeate water, and keep it there until a decided sensation of cold was felt : this was produced in a short time, and, unless I had had ocular demonstration of the singular change which had been produced on the surface of the wound after bathing, I am convinced I should not have credited it; for it was covered with small granulations of so brilliant a scarlet, that I considered them, at the first glance, to be spots of blood. But this was not the case. The leg was now allowed gradually to dry; a simple dressing was applied to the wound, which was then rolled with the bandage. I directed him to pursue the same plan three times a day, and inculcated strongly the necessity of retaining the limb in a horizontal posture, and advised him to take that nourishment which would not produce irritation.

In ten days all the inflammation had subsided, and the wound was reduced to the size of a small pea. Not being enabled to remain

in Swainswick any longer, on account of his presence being required in London, he left, very much gratified with the result of his trip. In this case the power of the water was very manifest : acting, in the first place, as an irritant, it roused a set of diseased and sluggish vessels into activity ; then, as a sedative, it allayed the inflammation which its first application produced, and, from its astringent nature, considerably lessened the size of the veins ; thus proving its great influence over ulcerated wounds.

The application of spring-water, before the carbonic acid gas has entirely escaped from it, to diseased surfaces, is a very favourite remedy on the Continent. The unirritating nature of its component parts—the peculiarity of that gas to which it owes its sparkling appearance—the sulphates and muriates of lime, which it generally holds in solution—its very temperature—all tend to effect the most salutary

changes in such diseases. Having witnessed, as I had, such good effects from the use of a fluid which has been so bountifully bestowed upon us, it was my invariable custom, during the space of three years in which I had the medical charge of *eight Parishes*, to treat wounds of the character we have been considering with water dressings during the day, mild and un-irritating ointments by night, and the roller bandage; and very few were the cases that did not experience relief from such treatment. The water, however, which we obtain from common springs does not, in wounds of the lower extremities, that have existed for one or two years, excite sufficiently: the degree of inflammation, which its application brings on, is often inadequate to throw off the original disease, and after a little time the wound sinks back to its former state. In such cases a powerful chalybeate will effect the desired change.

SECTION V.

WHEN the Bladud Water is taken internally it produces a rapid increase of temperature, a full and bounding pulse, heightens the tone of the stomach, and endows the muscular fibre with an increase of energy. The increased rate of the pulse frequently continues for several hours after the water has been taken, more particularly, if the stimulus is perfectly new to the stomach, and produces a corresponding excitement in the whole system. It is therefore very indispensable, that some gentle aperient medicine should be taken previously to commencing the drinking of the water; and I do not know any that answers the purpose more efficiently, than

Epsom salts in combination with the ponderous magnesia, in the following proportions: two ounces of the former, and four drachms of the latter, dissolved in a quart of tepid water, and allowed to cool; of which an adult may take a wine-glassful every morning for the first three days, before a course of the water is entered upon, and may continue to do so twice a week for a month. Its action will be gentle, and the alkaline properties of the magnesia will correct any acidity, which may exist in the stomach, or alimentary canal.

In administering a little preparatory medicine to children, as it will not be advisable to give Epsom salts to such as are under ten years of age, the most beneficial kind is, sulphur in combination with a little tartrate of potass, which will act upon the bowels, and likewise take a very great effect upon the skin. Where sulphur is objected to, four drachms of the tartrate of potass, and half an ounce of manna, dissolved in three ounces of

infusion of senna, and the same quantity of tepid water, may be made up; and a dessert spoonful, to two table spoonsful, given every second morning for a week, according to the age of the child.

In taking the Bladud Water, it is necessary to attend very particularly to diet; for medicines are frequently prevented from taking their proper effects, either by the nature of the food, or from the quantity. The diet must consequently consist, in the generality of cases, of solids, which can be easily digested, and fluids, that will gently stimulate, without producing irritation. The plainest animal food, as mutton, beef, or chicken, which has been under the direct influence of fire, as by broiling or roasting, with a moderate proportion of bread, and such vegetables as do not quickly pass into a state of fermentation, will be found to answer the first intention; sherry, or weak cold brandy and water, will fulfil the second intention.

Another very material point to be observed is, that the stomach should, if possible, be in a quiescent state before the usual meals are taken; and I feel convinced that it is from a want of due attention on this head, indigestions are so very common. In early life we are so reckless of consequences, that, not considering our bodies are endowed with vitality, we go on, as if they were mere machines, which only require winding up by food and sleep to fit them for any, and every duty; but, the effect of such treatment is developed in the manner, in which they are prostrated by disease. On referring to the various causes, which have produced this state of the system, perhaps we might find, the overloading of the stomach directly upon bodily, but particularly upon mental exertion, to be one of the most prominent: it is therefore very advisable, to allow the system a little time to regain its elasticity after exertion, before we give it other duties to perform,—then digestion goes on well, and our bodies are

invigorated by the nourishment which has been taken.

On account of the highly stimulating nature of the Bladud Water, the length of time for drinking it, must depend upon the effects which it produces. Three weeks, or a month, is the average period. Should much heat of the skin, and dryness of the mouth be produced, it will be necessary to discontinue its use, and to have recourse to a little of the magnesian aperient.

To derive full benefit from a mineral water, it is not only requisite that it should be drunk at the spring, but also be taken at that period of the day, when the system is most active, and capable of receiving impression. No period, therefore, can be so proper to take the first glass of water, as before breakfast, and at eight o'clock. Independently of the advantages which would result from this plan, early rising, in every way so conducive to health,

is here indispensably necessary. Too much sleep enervates the constitution, and although many years may glide away, before the various functions of the different organs composing the human frame are sensibly affected by it, yet, as the hardest rock will eventually give way to the continued dropping of water, so will the system suffer from an indulgence of such a debilitating tendency. If, therefore, we would enjoy health, and that bright resilience of spirit, which contributes in a great degree to the happiness of the human race, and which can generally spring up again, superior to whatever crush the world may sometimes inflict upon it, we ought to seek them by early rising.

Nevertheless, a certain quantity of sleep is necessary, to renovate the powers both of the mind and body of man, after consecutive study or labour. The *quantity*, however, must be regulated by the *degree* of benefit which will be derived; for, as it is with food,

so it is with sleep: that which shall be sufficient for one individual, will be found inadequate to the requirements of another; therefore, the quantity of sleep, as well as of food, must be adapted to the organization of each individual. At the same time, this observation does not step over the objections against late rising; for when the day is young and bright, all nature is fresh and vigorous,—vegetation has thrown off the noxious principle, which would otherwise militate against its flourishing, and is now equal to the demands made upon its strength. In like manner the human frame, affected and invigorated by the bracing morning air, is much more capable of triumphing over the attack of any disease, than if weakened by indulgence. Early rising therefore, and a correspondent retiring to rest, being productive of the most beneficial results, where shall we look for the great causes which prevent their being adopted? To the fatal influence of custom!—more especially to the crowded drawing-room,

that desolates many a home! hurries away myriads of the young, and gay, and beautiful—the pride and hope of families—to an early grave. Its heated atmosphere, the high tone of excitement, which pervades the unparalleled brilliancy of the assembly it contains, sow the seeds of death in blossoms, which have, as it were, shot forth, but to be blighted! Hence the frequency of that terrible scourge, consumption, so insidious in its advances—so fatal in its embrace; at whose approach the eye brightens, and the cheek crimsons, and the pulse trembles beneath the touch, until its fire has sped through the system, and sapped the very fountain of existence!

Frequently, after drinking the water of the Bladud Spa, particularly, for the removal of cutaneous eruptions, an erysipelatous inflammation of the skin will break out. This, however, is to be regarded rather in a favourable light, than otherwise; as, in less than forty-eight hours after such an appearance, I have

seen the original disease singularly altered for the better. A Lady was advised to drink the water, and bathe her face with it, for a severe eruption. Shortly after the first application, her face was covered with pustules: alarmed at this appearance, she left Bath for Clifton, being determined to have nothing more to do with so formidable a remedy. I had not the pleasure of seeing this lady, or I should have endeavoured to prevail upon her, to give the water another trial.

In drinking the water, it will be most advisable to commence with the smallest glass, which contains about four ounces: the increase in quantity must be made with caution, until a pint and a half, or two pints, can be taken in the course of the day, without producing any unpleasant effects. The periods for drinking should be so arranged, as that the water might be taken half an hour before a meal. Should much dryness of the skin, accompanied with irritability, and increase of

heat supervene, it will be necessary to have recourse to the saline aperient, before it is resumed again.

The very great perfection to which analytical chemistry has been brought, has been the means of satisfactorily demonstrating the existence of iron in the blood. It is there found as a peroxide, which, being of a bright red colour, is, therefore, presumed to be the principal colouring matter of the blood. But nothing very accurate respecting such a conclusion can be arrived at; for, as long as vitality is one of the great causes which produce the various changes in the animal system, so long shall we be in the dark respecting the true cause of its colour. But, reasoning from analogy, we may infer that, as the peroxide of iron is of a red tint, it is, in all probability, the colouring matter of the vital fluid.

Now we may have remarked that, in those who possess a sanguine temperament, the blood

is of a bright and beautiful crimson—the action of the heart is powerful,—and the calibre of each artery—from the largest to the most minute—is completely filled with blood at each pulsation, so that the circulation immediately beneath the scarf skin is perfect, and completely visible through that membrane.

This, in all probability, arises from the stimulus, which a very abundant supply of iron in the blood gives to vessels, of whose diameter the imagination can scarcely form an idea, it being so minute; and which, consequently, stand in need of some more powerful stimulus, than that of their own vital action, to assist in propelling the blood onwards.

In individuals, whose skins are colourless, the minute ramifications, or branchings, of the cutaneous arteries, do not possess the power to take up the red particles of the fluid so freely; they, therefore, absorb the thinner watery portions, leaving the red blood to

traverse vessels of a larger diameter. In chlorotic cases, where a general irritability, combined with a singular weakness and torpidity, exists, it is considered that there is a remarkable deficiency of iron in the blood. Such affections will derive immense advantage from the use of the Bladud Water.

CASE.

A young girl, the daughter of a French woman, was brought to the Spa for my advice. Her appearance was deplorable in the extreme: her skin was of a yellow-brown tint, and presented a very exsanguined appearance; her lips were colourless; her dark eyes were heavy, and particularly dull; her hair, which must have been of a fine chesnut colour, had lost its brilliancy and softness, a sure indication of ill-health in young persons. She was emaciated, cold, and torpid; her appetite was gone; she complained of constant sick-

ness ; the slightest exertion overpowered her ; and her greatest comfort was to be alone.

I put her under a course of alterative medicines, as the compound calomel pill, the watery extract of aloës, and Castile soap, with an occasional black draught ; recommended a diet of the most nutritive kind—animal food, twice a day, with porter ; and directed her to drink a quarter of a pint of the water three times a day, and to use a bath of 98° every second day. Three weeks elapsed before I again saw my patient ; I had, however, in the mean time, been regularly informed, that the plan of treatment had been persevered in. The change which had now taken place in her constitution, and appearance, was surprising : her spirits were natural, her voice good, her eyes had regained their brightness, and the flush of health lighted up her countenance. She was delighted with the change ; and, to this present moment, continues in the enjoyment of good health.

It is, therefore, not unreasonable to suppose, that the credit of this case is due to the powers of the Bladud Water: for, as light excites vision; odorous particles, the sense of smell; sound, that of hearing; solids and fluids, that of touch;—so the peroxidized salt of iron, with the various other salts existing in the water, not only contributed largely to produce colour in this instance, but so stimulated the minuter blood-vessels, that it enabled them to circulate freely those particles which they had before rejected.

SECTION VI.

WHATEVER advantage may be derived from drinking the Bladud Water, no matter, in what description of disease, save those where a determination of blood to the head is to be dreaded, the good effects are materially increased by bathing.

The function of the skin is of such material importance to the well-doing of the body, that, if it be impeded for any length of time, the system will most assuredly be affected with disease, in some form or other. Nothing, therefore, deserves greater attention than the state of that membrane, and any

application which induces a healthy action of it, must prove of immense service to the system generally.

In all ages, and in most climates and countries, except our own, bathing has always been considered as an indispensable requisite for the preservation of health; and most effectually does it answer so important an end: for in giving a high tone to the muscular fibre; in producing a full, free, and forcible action of the heart and arteries—whereby the whole system is affected from its centre to its remotest extremity; and in promoting that full respiration, and that insensible perspiration, without which a perfect arterialization of the blood cannot take place, no stimulus is comparable to the bath.

What are the effects of a plunge into cold water? The glow of warmth which is diffused over the body,—the bounding of the heart and arteries,—the deep drawn and complete

respiration, prove how it has acted upon the system. For an instant the animal frame, with its complicated apparatus, recoiled as it were upon itself! The action of the heart became slower,—the lungs, being full of air, ceased to play; and this state of things continuing until the bather appears at the surface of the water, every part of the body is ready to sympathize with the re-action which takes place. The instant respiration commences, then all the before mentioned effects supervene.

But cold bathing is not always productive of such beneficial results. Instead of the glow of warmth, and the deep respiration, there may be convulsive sobbings, accompanied with heavy shivering fits: the action of the heart may be almost imperceptible; fainting may possibly come on. These circumstances indicate that cold bathing does not agree, but might, if persisted in, bring on serious mischief. Constitutions affected in this manner require a tepid bath.

The Bladud Spa Water, however, acts most efficiently when employed in its cold state; for, as I have elsewhere stated, heat entirely expels the carbonic acid gas (by whose power the iron is held in solution), and when that occurs, the principle upon which the character of the water depends is altogether wanting, and we in vain look for any benefit to result from its application.

The most effectual manner of applying the water to wounds of the lower extremities, is by completely immersing the diseased limbs in a tub containing it, once at least every day, and likewise, where it is possible, to allow a stream of water to fall upon the ulcerated surface night and morning. They should be dressed in a room of a temperature varying from 90° to 95°; and when they are dry, it is requisite, that they should be covered with lint, upon which spermaceti cerate has been spread. The whole must be rolled with a bandage, which it will be advisable to keep moistened with the water during the day.

We will now take a more general view of those complaints over which the Bladud Spa Water exerts its peculiar influence. One of the most important is that Protean malady, Dyspepsia, or Indigestion.

The habits of all persons lay them open to the attacks of this singular complaint. But, generally speaking, it most assails those of the ages between thirty and fifty; and is found to imitate almost every known form of disease. It usually commences with flatulency; little or no notice is taken of this symptom: it is allowed to proceed day after day, although always producing much uneasiness. At length pain is felt in the region of the stomach after a meal; sickness, or nausea comes on; there is vast oppression at the chest; the brain seems to sympathize, from disordered function; violent head-aches supervene; pains in the limbs, and spasms of the muscular fibre, are complained of. Nor can we be surprised, that these distressing symp-

toms, and overpowering sensations, which render life a burden to many, should result from the functional derangement of an organ so very important to the system, as is the stomach!

With this impaired state of function, we generally find a habit of body that requires the assistance of aperient medicine; and, therefore, in conjunction with the magnesian aperient, which should be taken twice a week, I usually advise a pill, composed of the fourth of a grain of blue pill, and two grains of the compound rhubarb pill, combined with two grains of the extract of chamomile, and one of Castile soap:—two pills to be taken in the course of the day, for four days; one an hour before dinner, the other at bed-time. At the expiration of the fourth day, one pill may be taken every second day, for one month. With the single pill it is desirable to commence drinking the water; half a pint to be taken at twelve o'clock, and gradually increased in quantity, until such time as that

twenty-four ounces can be taken at two separate intervals. A bath of 95° must be used every second day, together with friction over the region of the stomach, and along the spine, by means of the flesh brush.

In cases of mental depression, and in those also of nervous irritation, where the whole system is agitated from the smallest circumstance, the water will prove of the utmost advantage.

Acute Rheumatism.

During the inflammatory stage of this disease, the water is in every way contraindicated; but after the complaint is removed, and when merely consequent weakness, stiffness, and lassitude remain, the use of a bath of 98° to 100° will produce much benefit. The water, however, must be drunk with caution.

Chronic Rheumatism.

In this complaint, as likewise in all chronic swellings of the joints, or where the muscular fibre has lost its tone, the application of a stream of the water, temperature 98°, directed upon the part or parts, in conjunction with a bath of a similar temperature, will prove particularly useful.

But its most astonishing influence is shewn in diseases of the skin, from the slightest roughness to the more formidable cases of Lepra, Tinea Capitis, Acne in all its varieties, Psoriasis, &c.

CASES.

Obstinate Case of Tinea Capitis.

The daughter of a Lady, who resided in Grosvenor Place, Bath, had been afflicted for

several years with this complaint. The poor young creature's head was one continuous wound, and the discharge which came from it was excessively acrid and irritating.

She was put under a course of sulphur and compound calomel pill, and a powerful Iodine lotion and ointment were applied to the scalp. The latter were, however, after a short time, laid aside. The head was then directed to be washed four times a day with the water, and the medicine to be continued without any alteration.

In a very few weeks the disease entirely gave way; the scalp healed, and continued in a sound state for some time; when a few patches reappearing, it was considered advisable to have recourse to the water again. Hitherto it had been applied in a tepid state; we now determined to apply it cold, when the complaint speedily disappeared. The young lady is to this moment perfectly well; but still has her head washed every morning with the water.

Mrs. H., Northampton Row, Bath, came to the Spa for advice respecting her child, aged three years. Its head, face, body, and extremities appeared, as if they had been chopped with a penknife. On the application of pressure to any part, blood immediately poured out; and the unfortunate infant was continually screaming from the intense pain it suffered.

It was put under the influence of sulphur, and alterative medicines; and the hydriodate of potass, combined with spermaceti ointment, together with an Iodine lotion, were by turns applied to the parts affected. This treatment was pursued for some time, without any visible improvement taking place in the disease. The ointment and lotion were left off; the child was plunged into a cold bath of the water; and the mother was directed to sponge its body with the water three or four times a day. At the expiration of a month, a great improvement had taken place in the appear-

ance of the disease, and shortly after the child was perfectly cured.

Now, in both these cases, the advantage of the water applied in its cold state, over any increase of its temperature produced by artificial means, was decided ; and, whatever pain was brought on at the time of its application, it was amply counterbalanced by the subsequent ease which ensued.

The above results likewise prove, in a most satisfactory manner, the influence of the water over those obstinate and terrible cutaneous disorders, to which children are generally subject from a variety of causes.

This Chalybeate Water proves of great utility also in chronic inflammation of the eyelids, and in all cases where systemic or organic weakness exists. Indeed Cruveillier observes, that he regards iron “ as a specific in hyper-

“ trophy of the spleen, or chronic splenitis,
 “ whether primitive or consecutive to disease.”

From what has been observed relative to the powers and virtues of the Bladud Spa, it will be seen, that, although in many diseases it produces the happiest effects, in others it is altogether contraindicated; for, if administered during certain states of the system, it throws the brain into an unnatural degree of excitement. This is caused—

1st. By a direct impression upon the Nervous System;

2dly. By an increased action of the Vascular System.

This increase of action, in the latter, augments the actual volume of the blood, which is met, on the part of the blood-vessels, with an enlargement of their calibre; so that these circumstances, acting in unison, press upon the delicate structure of the brain, and produce those violent headaches, throbbings,

and ringing in the ears, which some experience who unadvisedly drink the water.—Hence it is evident, that its use is contraindicated—

1st. Where there is a tendency to a determination of blood to the head;

2dly. Where an inflammatory habit exists.

The increased action of the heart, and arteries, proves, what a stimulating effect the water takes upon the vascular system.

The rate of the circulation being thus increased, the lungs have a larger proportion of blood driven through them, than is natural; and, provided their component parts are not equal to the increased force, and volume of the fluid propelled through them, one of two circumstances must, or, perhaps both may, occur,—violent inflammation, and a breaking down of structure. Its use is, consequently, contraindicated—

Where there exists a predisposition to disease in the lungs.

Upon the stomach, alimentary canal, and the other organs subservient to digestion, the water operates in such a way as to increase their actual power; that is, it stimulates them; and this stimulus acts in two ways—directly and indirectly,—

Directly—upon the part itself;

Indirectly—through the medium of the circulation.

Acting directly, it possibly excites; for instance, of the stomach, the secreting surface, to give out a more abundant supply of the gastric fluid. As the water passes from that organ to the first portion of the bowels, into which the tubes that convey the bile from the liver to the intestines open, it passes over the orifices of those tubes; which then sympathize in the local excitement, and possibly transmit that excitement to the liver, which causes it to act with greater vigour.

The absorbents also participate in the good

effects resulting from the use of the water, thereby performing their functions with more alacrity. The water is, therefore, to be advised,

1st. Where sickness, heartburn, flatulency, and the train of symptoms dependent upon a weakened digestion, are present;

2dly. Where the flow of bile is incomplete;

3dly. Where weakness of the alimentary canal exists; which weakness is said by some authors, to be a cause of worms.

Applied to indolent secreting surfaces, it creates in them a new and improved action; alters large and flabby granulations (commonly termed proud flesh), and changes the nature and properties of their secretions.—It is therefore beneficial in—

1. Obstinate, ill-conditioned, and indolent ulcers;

2. In all diseases of the skin.

Acting indirectly or generally upon the system, it rouses the dormant functions into

activity, and induces a healthy action where a diseased one before existed.—It is therefore useful—

1. In Leucophlegmatic habits ;
2. In Chlorotic cases ;
3. And in every instance, where there is defective secretion.

I should observe also, that the Bladud Water is particularly serviceable in cases of Hysteria. This disease generally attacks those, whose minds are easily excited—whose passions are strong—whose imaginations are brilliant, quick, and vivid,—too much so at any rate for that frail vessel, which has to carry them down the busy, bustling stream of life ! How often, in such subjects, does it commit ravages fearful to behold, and horrible to contemplate !

Those too, who, like exotic plants, have been reared in an artificial temperature—nursed in the lap of luxury—and enervated by the abso-

lute dominion of fashion—are frequently its victims. In such we meet with it in all its stages—from a sense of suffocation to the full development of its agonizing powers—overthrowing the harmony of the system, undermining the constitution, and bringing down destruction on life itself. In cases so melancholy as these, the tone of the system is totally gone, and the patient is dependent upon sedatives and stimuli for existence.

I have known an instance, where a Lady, suffering from this malady, has taken three, and sometimes four, drachms of “Battley’s solution” in the course of the day. The case had existed for six or seven years before I was called in to advise about it; and it eventually baffled every kind of treatment. I attended the patient constantly for more than two years, until the time of her decease. She was indeed a proof, how incapable a brilliant mind is of resting in a frail body. She possessed talents of the first order; excelled in music; spoke a

variety of languages with remarkable fluency; possessed a power of expressing her ideas with singular grace and elegance: but, alas! how like a garden laid out in the most enchanting manner, and abounding with the richest fruits and the loveliest flowers, was the mind of that talented, accomplished, and amiable lady! She was, by a particular blast, withered and destroyed. In her case, that blast was hysteria. She is gone—and this humble tribute to her memory is paid by one, who, as a young man entering upon life, deeply felt, and ever must feel, the kindness which he experienced at her hands, and at those of her most estimable family.

In the early stages of cases of this description, the use of the water will be found of great service.

I have now considered those diseases, which will be benefited by the internal exhibition, and the external application of this powerful chalybeate.

I have shewn the manner in which it acts upon the system; the power it possesses, of increasing the force and frequency of the pulse, and the energy of the muscular fibre; of imparting colour to the blood; of altering the secreting surfaces of sluggish wounds; and improving the general tone of the system.

We have seen by the Analyses, that it contains large quantities of the oxide of iron; and have had the reasons explained, why much of the efficacy of the water is lost by exportation: and I may observe that a multitude of afflicted persons, who have been cured or relieved of their several diseases at the Spa, can vouch, that the statements I have offered, respecting its powers, are not too highly coloured.

The success, therefore, of this Spa, we must hope few persons will be found to regard with an indifferent eye, and fewer still with an evil one. This *infant establishment*, duly encouraged and promoted, will impart its *beneficial influences*,

not only to the multitudes of individuals who may need the use of such a water, but it will extend it also intermediately to the most beautiful city in the world—the pride and boast of England; whether as regards her general appearance—her noble institutions—her magnificent buildings—or the generous character of her inhabitants.

Bath has ever been considered the cradle of the sick—the couch of the infirm—the hall of pleasure to the young—a place of amusement and interest to all. To her other attractions, she now unites that of a Cold Mineral Spring of the first power, which, from want of opportunity to develop itself, has been for ages unknown. Now, since it is brought to light, and its wonderful curative properties have been fully established, the fostering warmth of an extended patronage is only wanted, to invigorate an institution so peculiarly and singularly deserving of public notice and support.

TERMS OF SUBSCRIPTION

TO THE

BLADUD SPA,

JANUARY 1st, 1837.

	£	s.	d.
A Family of two persons—for a Year	1	1	0
All above two persons, each	0	6	0
Family of two persons—Half a Year	0	15	0
All above two persons, each	0	4	0
Family of two persons—Quarter	0	10	0
All above two persons, each	0	3	0
Family of two persons—one Month	0	7	0
All above two persons, each	0	2	6
A single person—for a Year	0	10	6
Quarter	0	7	0
Month	0	4	0
Week	0	2	6

Subscriptions paid in advance.

Every Annual Subscriber is allowed two Bottles of Water daily, besides what they use at the Spa Pump Room.

Hot Mineral Baths of every description, and to any temperature, at the shortest notice.

JOSEPH BLACKWIN.

ADVICE will be given at the Bladud Spa, gratis, by Mr. CONWAY EDWARDS, to poor people, who bring with them a recommendation from an Annual Subscriber, every Monday, Wednesday, and Saturday, from 1 to 2 P. M.; or at Mr. Edwards's Residence, Batheaston, daily, from half-past 8 to half-past 9 A. M.

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